

GANIT PRABHUTWA EXAMINATION

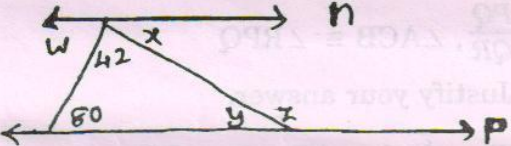
Date : 14.12.2014

Std. VIII

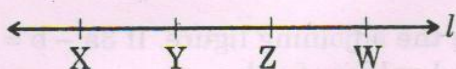
Total Marks : 100
Time : 12 noon to 3

N.B. : Proper procedure and explanation is necessary.

1. a) Using $\sqrt{156816} = 396$, write square roots of 15.6816 and 15681600. 10
 b) 64% of a number is equal to 80% of 400. Find the number.
 c) The ratio of two numbers is 3 : 8 and the two numbers differ by 85. Find the numbers.
 d) Find the average of : 1003, 1008, 1023, 1038, 1099, 1091.
 e) At what rate a sum will be double in 8 years by simple interest?

2. a)  In the adjoining figure, 15
 line $n \parallel$ line p .
 Find the values of x, y, z, w .

- b) Factorize : $x^4y^4 - 625$.
 c) What should be added to the sum of $(6p^2 + 4p - 17)$ and $(4p^2 - 7p + 10)$ to get $(10p^2 - p + 11)$?
 d) Points x, y, z, w lie on the line l



- i) Write two pairs of opposite rays.
 ii) Name two rays which don't have any point in common.
 iii) Name two rays in which seg yz is common.
 e) Area of a square is 1089 cm^2 . Find the length of its diagonal and also find its perimeter.

3. a) Construct ΔPMN such that $MN = 5.0 \text{ cm}$, $\angle M = 55^\circ$, $\angle N = 65^\circ$, and construct its circumcircle. 15
 b) If Seema's income is 30% less than that of Meenas, then by how many percent is Meena's income more than Seema's?
 c) The diameter of a wheel is 90 cm. How many revolutions will it make in a distance of 1413 meter? ($\pi = 3.14$)

d) Solve : $\frac{x+4}{7} + \frac{2x-5}{3} = \frac{3x-2}{4}$

- e) Leelatai purchased the following items from Khadi Gramodyog Bhandar. One khadi silk saree for Rs. 2550.00, one khadi bed sheet for Rs. 375.00, Sandal wood items for Rs. 495.00, Agarbatties for Rs. 95.00, Gift articles for Rs. 235.00. She paid Rs. 3281.25 as there was some rebate. Find the percentage of rebate.

4. a) Find the number of sides of a polygon having 90 diagonals. 20

- b) The average expenditure of a person for first 4 months is Rs. 10,000 and for the next 8 months Rs. 15,000. If he saves Rs. 23,000 during the year, find his average monthly income.

- c) A boat travels 48 km in the direction of the current of a stream in 6 hrs. It covers the same distance against the current of the stream in 12 hrs. Find the speed of the boat in still water and the speed of the current.

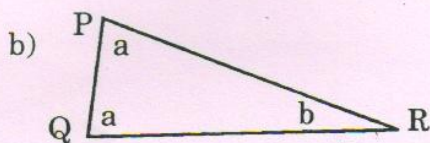
d) If $(x + y)^2 = 6$, $(x - y)^2 = 2$; find value of $4xy (x^2 + y^2)$

- e) i) In $\triangle ABC$ and $\triangle PQR$ $\frac{AB}{BC} = \frac{PQ}{QR}$, $\angle ACB \cong \angle RPQ$

Are the triangles similar? Justify your answer.

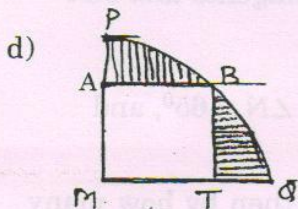
- ii) Construct a Rhombus ABCD such that $AC = 6\text{cm}$, $BD = 4.5\text{ cm}$.

5. a) A and B complete a work in 45 days and 40 days respectively if they work alone. They started doing the work together, but after some days A left the work and B completed the remaining work in 23 days. Find after how many days A left the work. 20



Observe the adjoining figure. If $3a - b = 100$. Find values of a , b .
State the type of $\triangle PQR$.

c) Simplify : $\frac{6x^2 - 7x - 3}{2x^2 - 21x + 27}$



In the adjacent figure, $\angle M = 90^\circ$, M is the center of arc PBQ of a circle. $MP = 10\text{ cm}$, $\square ABTM$ is a square. Find the area of the shaded region. ($\pi = 3.14$).

6. a) i) Without using a protractor construct an angle of measure 60° . 20
ii) Find the value of p , if $4^{44} + 4^{44} + 4^{44} + 4^{44} = 4^{9p}$.
- b) Find the smallest complete square which is divisible by 9, 10 and 11. also write its square root.
- c) Two parts of a number are such that one part is half the other. Also the sum of these parts is greater than their difference by 8. Find the number and the parts.
- d) i) In a regular octagon PQRSTUVM, the sides PQ and TS are produced to meet at K. Find measure of $\angle K$.
ii) Find the difference in the place values of 6 in the number sixteen lakh fifteen thousand nine hundred sixty seven.
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